

Appl. No. 10/074,954
Amdt. dated Jan. 04/2004
Reply to Office action of Nov. 4, 2003

Amendments to the Specification

Please replace the abstract of the disclosure with the following amended abstract:

An apparatus for solving an edge exclusion problem when polishing a semiconductor wafer ~~comprising~~ includes a rotatable polishing platen ~~having an upper surface,~~ with a polishing pad fixedly attached to ~~[[the]]~~ its upper surface~~[[, a]]~~ : A polishing slurry ~~containing a mechanical abrasive is~~ deposited on the upper surface of the polishing pad during polishing. Mounted above the polishing pad is a rotatable polishing head for holding a substrate assembly, ~~having a shallow recessed face adapted to centrally hold the upper back surface of the substrate, the recessed face is oriented substantially parallel to the upper surface of the polishing platen.~~ The rotatable polishing head assembly has its rotatable axis offset relative to the rotatable axis of the polishing platen. A non-rotary cylindrical actuator assembly is coaxially oriented about the outer edge of the rotatable polishing head assembly, with a A ditched ring is removably attached to the bottom surface of the cylindrical actuator assembly. ~~The ditched ring also has a bottom section of a reduced wall thickness of approximately 5 mm.~~ A multiplicity of conduit grooves are formed in the bottom section of the ditched ring that allows a boundary layer of abrasive the polishing slurry to travel unimpeded ~~[[to]]~~ beneath the rotating semiconductor wafer. ~~[[The]]~~ A reduced wall thickness at the bottom of the ditched ring is configured to displace wrinkles from the outer edge of the wafer to the outer periphery of the ditched ring. This solves the edge exclusion problem, while the concentric conduit grooves allow unimpeded tracks of abrasive slurry to uniformly remove microscratches from the planarized surface of the wafer permitting polishing slurry to pass under the wafer.